

# **INVENTORY OF RESOURCES IN THE PANOCHES/SILVER CREEK WATERSHED**

by

**Karen Fullen  
Student Trainee Biologist  
USDA-Soil Conservation Service  
Fresno, California**

**Submitted to:  
US Environmental Protection Agency  
San Francisco, California**

**In fulfillment of  
Interagency Agreement Number DW12955170-01-0**

**May 1994**



The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means of communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-6881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20505, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

## **ACKNOWLEDGEMENTS**

Many individuals working for several different agencies contributed to this report. I would especially like to thank the staffs of the Hollister Resource Area office of the Bureau of Land Management for information on ownership, sensitive species, and grazing allotment management; the Fresno and San Benito County offices of the Agricultural Stabilization and Conservation Service for access to aerial photos and ownership information; the Region 4 and Natural Heritage Division offices of the Department of Fish and Game for information on sensitive species and riparian habitats; the San Joaquin Valley Endangered Species Recovery Planning Program, for information on sensitive species; and the University of California Cooperative Extension Service, for information on range management.

Within Soil Conservation Service, deserving of special thanks are: Kerry Arroues and staff in the Hanford Soil Survey Office for soils information; Frank Menezes and staff in the Fresno Field Office for assistance in gathering and compiling resource data; Emily Schwalen, Davis State Office, for assistance in mapping and assessing riparian zone condition; Jeff Hansen, Fresno Area Office, for assisting with the collection of range condition information; and Bruce Eisenman, Hollister Field Office, for providing aerial photos, soil survey maps, and National Wetlands Inventory maps of San Benito County.

Extra special thanks to Tom Share, Davis State Office, for preparation of the maps in this report.

## INTRODUCTION

The Panoche/Silver Creek watershed is located in western Fresno and southeastern San Benito counties (Figure 1). The watershed boundary northeast of Interstate 5 follows the approximate boundaries of the 100 year floodplain. This portion is referred to as the lower watershed, while the portion west of Interstate 5 is known as the upper watershed. Both portions together cover an area of approximately 291,500 acres; with wide variations in precipitation, topography, soils, and natural vegetation (USDA, 1976b).

The major land use in the upper watershed is rangeland, comprising nearly two-thirds of the area. Both sheep and cattle are grazed. About 30 percent of the area is used for wildlife habitat. The remaining land is used for both dryland and irrigated agriculture, especially in the Panoche Valley and on the terraces adjacent to Interstate 5 (Boyle, 1991).

About 31 percent (66,945 acres) of the upper watershed is public land managed by the Bureau of Land Management (Boyle, 1991). They manage for multiple uses including grazing, recreation, mining, and the protection of sensitive resources. Of the total amount of public land, 54,810 acres are in grazing allotments (Leathers, 1993).

Mining operations in the upper watershed include the Vallecitos Oil Fields, and a gravel quarry located near the Interstate 5/Panoche Road junction. Several abandoned mercury mines are located in the upper watershed as well (Boyle, 1991).

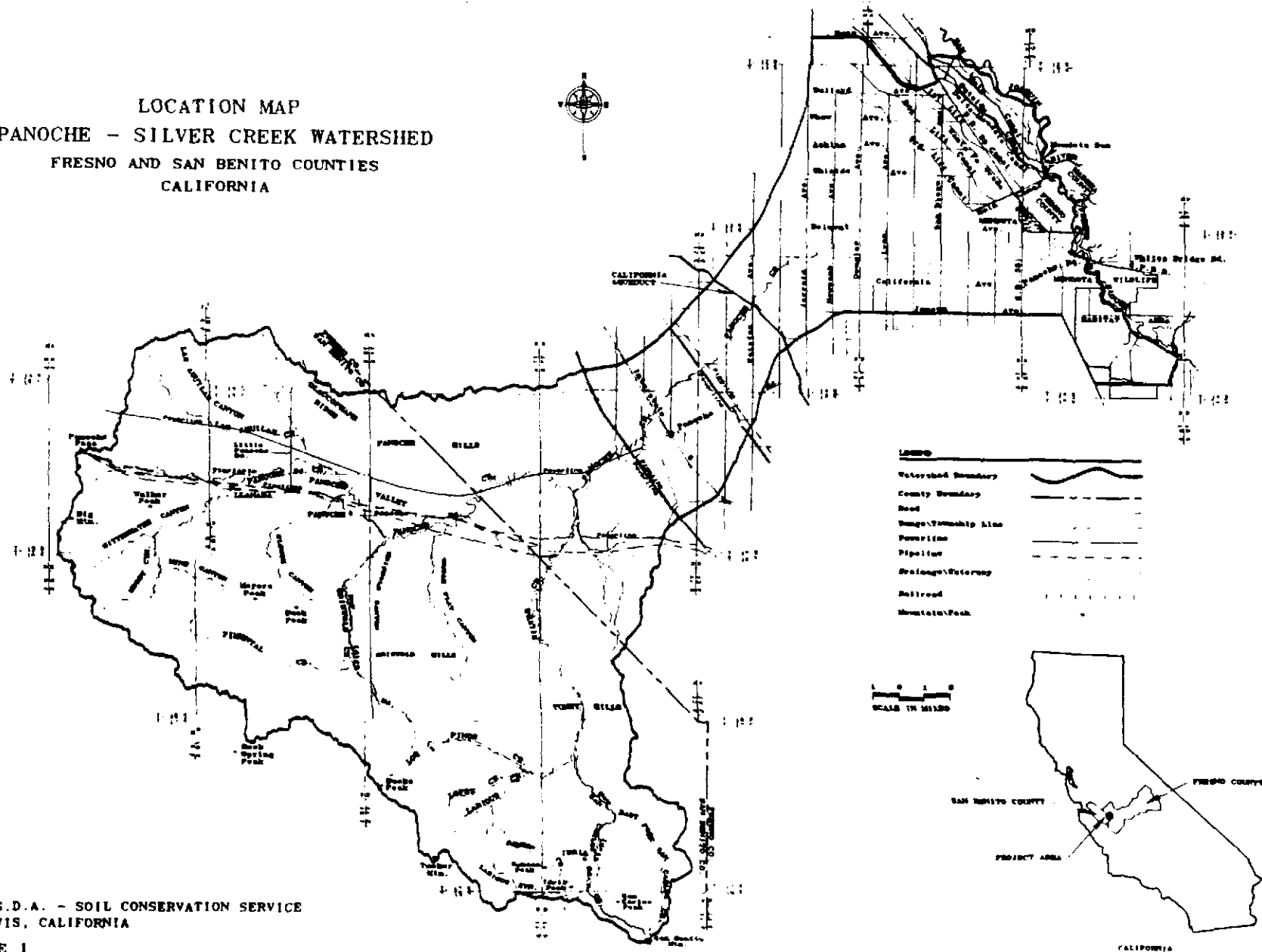
Irrigated cropland is the predominant land use in the lower watershed. Important crops include cotton, tomatoes, almonds, and grapes. The city of Mendota is the only significant urban land use in the watershed (USDA, 1976b).

Recreation uses such as fishing, camping, picnicking, and hunting waterfowl and game birds occur in the lower watershed near the San Joaquin River and Fresno Slough, as well as at public access areas of the California Aqueduct. In the upper watershed, the primary recreational use is hunting for upland game birds, deer, and wild pigs. Other activities include hiking, picnicking, and wildlife viewing (USDA, 1976b).

This watershed has a long history of resource problems, primarily associated with flooding and sedimentation impacts in and near the city of Mendota. More recently, this watershed was identified as a primary source of salts, selenium, and other trace elements which contaminate soils and ground water in the agricultural areas of the watershed (Presser, et. al., 1990). Since run-off from the watershed during flood events reaches the San Joaquin River and Mendota Wildlife Area via the Firebaugh Canal Company water delivery system and the Mendota Pool, degradation of surface water quality has also become a concern.

The purpose of this report is to provide information on soils; range productivity, condition, and management; cropland management; riparian zone condition; and sensitive species in the watershed. It is hoped that this

LOCATION MAP  
 PANOCHE - SILVER CREEK WATERSHED  
 FRESNO AND SAN BENITO COUNTIES  
 CALIFORNIA



U.S.D.A. - SOIL CONSERVATION SERVICE  
 DAVIS, CALIFORNIA

FIGURE 1

information will be helpful in making land use and management decisions, and in planning watershed enhancement projects.

## SOILS

*Seleniferous soils information has been compiled for the Western Fresno County Soil Survey currently in progress. Preliminary data from that survey shows seven map units in the Fresno County portion of the Panoche/Silver Creek watershed which have a component that is high in selenium. Most of the map units in the upper watershed consist of complexes and associations of two or three soil or geologic material components. Individual components within these complexes and associations are too intricately intermingled to map separately at the mapping scale used in the soil survey; therefore, each seleniferous component cannot be delineated individually (Arroues, 1993).*

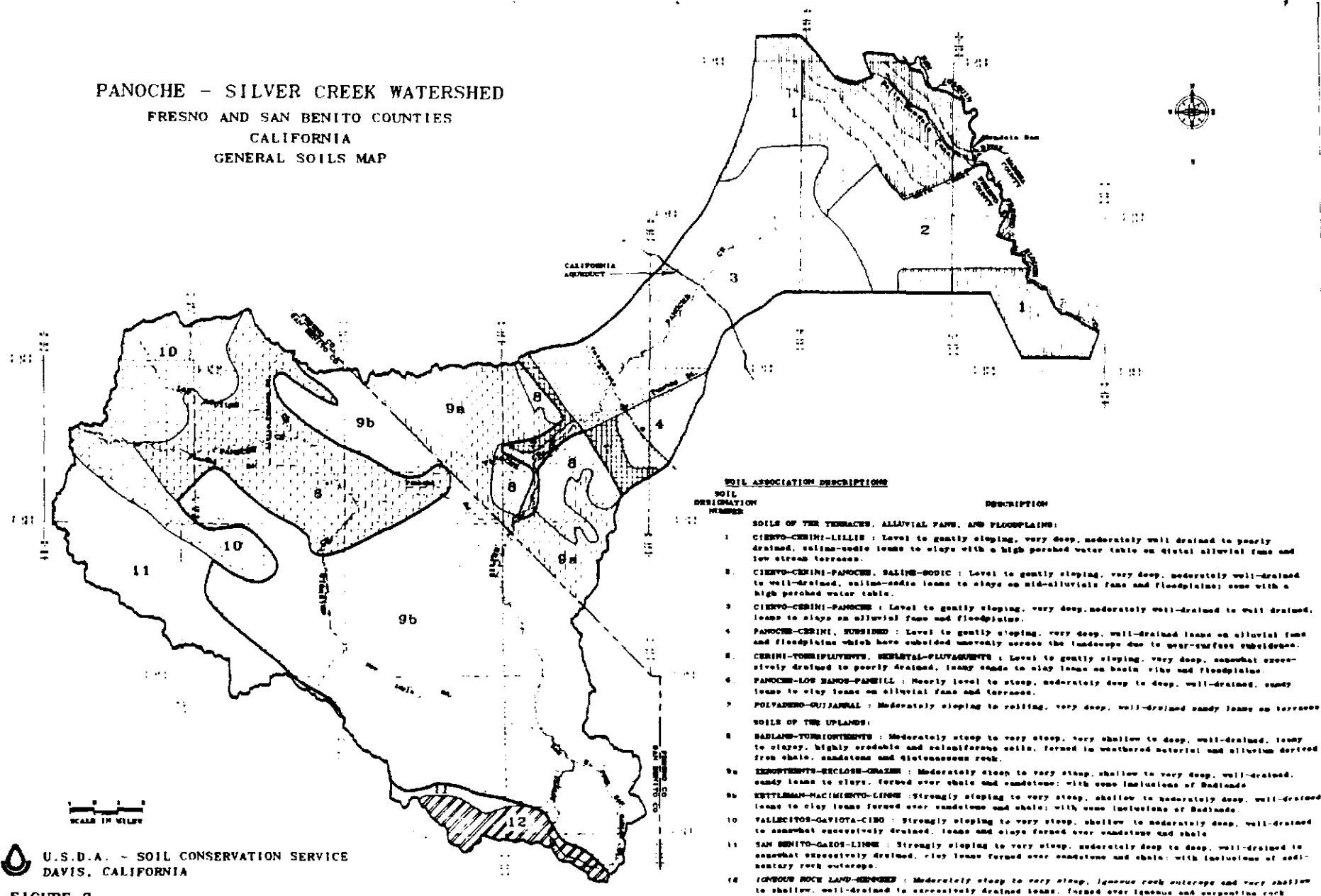
On the general soils map (Figure 2), map units 680, 717, and 737 have been included in Soil Association 8, Badland-Torriorthents. Kerry Arroues, Supervisory Soil Scientist in charge of this survey, estimates that this association contributes 80% of the total selenium load reaching Panoche and Silver Creeks and the valley from the soils in Fresno County. Association 9a, Xerorthents-Exclose-Grazer, which includes map units 720, 722, 723, and 739; contributes the remaining 20%.

*Seleniferous soils information for the San Benito County portion of the watershed is not available at this time. However, in comparing soil maps of this area with a USGS map showing the locations of the Moreno and Kreyenhagen formations, it appears that there could be a connection between the Badland map unit (BaG) and the Moreno formation and between the Sedimentary Rock Land map unit (SeG) and the Kreyenhagen formation (Presser, et. al., 1990 and USDA, 1969). These map units are found primarily in Soil Associations 9b and 11 on the general soils map.*

This possible correlation would need to be confirmed through field sampling and laboratory analysis. The USGS investigation of selenium sources in this watershed included only four samples of soil and geologic material from San Benito County, all of which were taken in close proximity to each other in the Tumey Hills (Presser, et. al., 1990). This limited sampling cannot confirm the possibility of the above mentioned connection.

Soil Association 9b, Kettleman-Nacimiento-Linne, is however approximately the same as Association 9a; so it is reasonable to conclude that a similar relatively small amount of selenium is contributed from these San Benito County soils. The distinction between these two associations was made to avoid confusion when using this report in conjunction with the two different soil surveys covering the watershed. The different names reflect the changes in soil survey techniques and philosophies that have occurred in the last few decades, rather than any major differences between the associations.

PANOCHÉ - SILVER CREEK WATERSHED  
FRESNO AND SAN BENITO COUNTIES  
CALIFORNIA  
GENERAL SOILS MAP



U.S.D.A. - SOIL CONSERVATION SERVICE  
DAVIS, CALIFORNIA

FIGURE 2

According to Arroues, a complete update of just the Panoche/Silver Creek watershed portion of the San Benito County Soil Survey would take two soil scientists approximately one year to accomplish. Testing for seleniferous areas only could be accomplished in a few months, assuming cooperation from landowners. However, the vast majority of selenium appears to originate from the Badland-Torriorthents association, a relatively small portion of the watershed when compared to the 9a, 9b, and 11 associations, from which the small remainder of selenium comes. In addition, the seleniferous formations near the top of the watershed are generally very well vegetated; in contrast to the largely barren areas in the Badland-Torriorthents association. Therefore, it would probably be more cost-effective to concentrate upon limiting the transport of selenium from the Badland-Torriorthents association, than to expend resources to further study other comparatively small sources of the element.

A listing of seleniferous map units and an explanation of terms used in the soil association descriptions on the general soils map are found in Table 1.

## **RANGE PRODUCTIVITY**

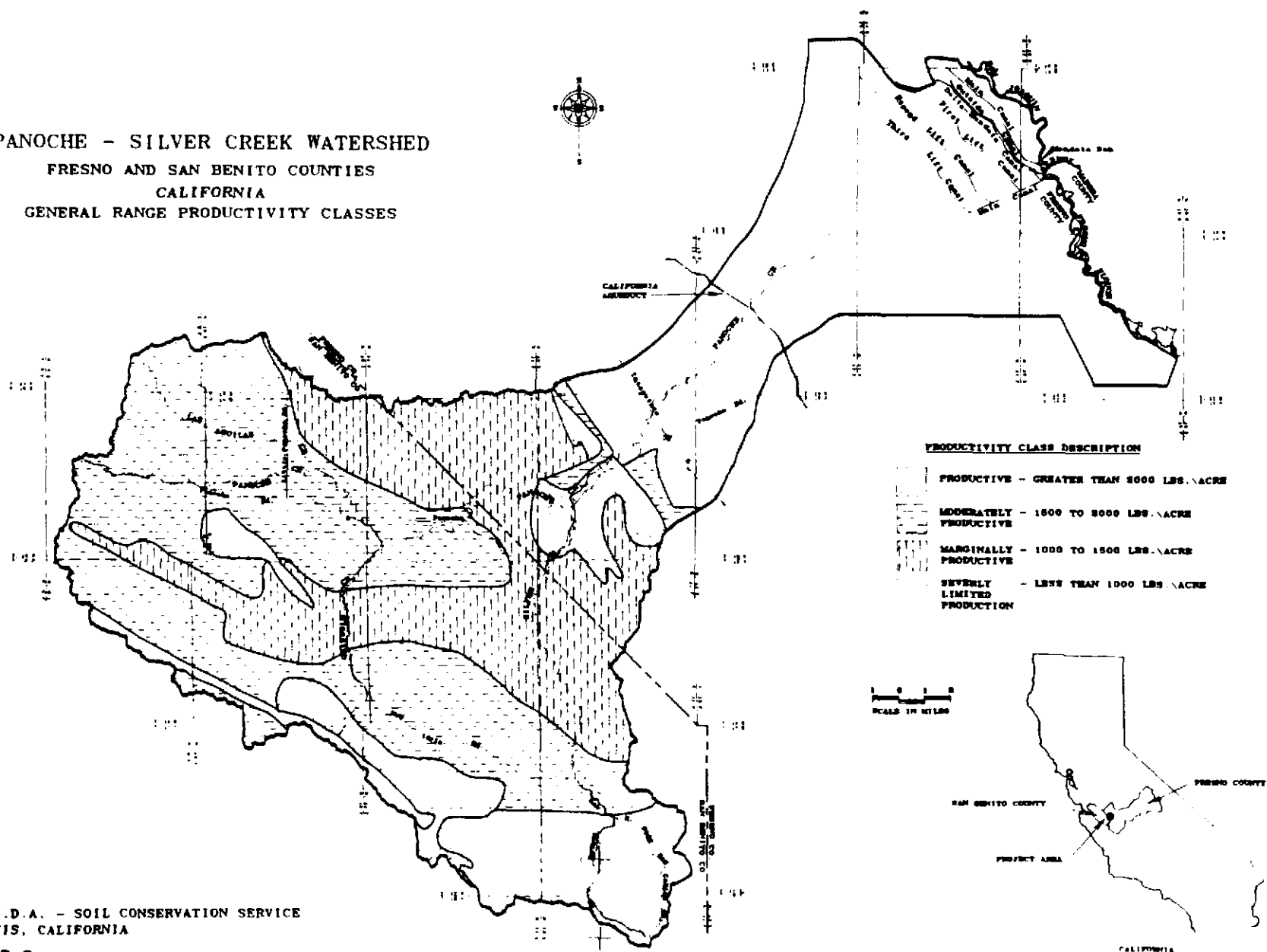
Due to the mapping of soils in the coast range portion of the Western Fresno survey in complexes and associations, forage productivity figures have been calculated for each map unit based on a weighted average of the production (in an average rainfall year) of each of the named components of the unit. Figures were rounded to the nearest 100 pounds per acre. For soil series in San Benito County, the average productivity figure from the corresponding range site description was used. Each map unit or soil series has then been placed in a category based on the suitability of the unit for livestock production. These categories and their map units/series are listed in Table 2.


In addition to the above, there are several map units which are Class VIII soils, and have not been rated for range site productivity. Soils and landforms in Class VIII have such severe limitations that their use for commercial plant production, including livestock forage, is precluded (Klingebiel and Montgomery, 1973). Class VIII map units in the Panoche/Silver Creek watershed are also listed in Table 2.

For calculating a weighted average production figure for the Western Fresno map units, the productivity of Class VIII soils and landforms, when included as a named component of a map unit, was assumed to be zero. In Fresno County, these map units occur extensively in Soil Associations 5 and 8; and are the major reason for their placement in the Severely Limited Production category. Class VIII components of map units are also found in the 9a association.

In San Benito County, Class VIII map units are found primarily in Associations 9b and 12; and sporadically in Association 11. Large areas of Class VIII map units are concentrated in the San Benito Mountain area and

**PANOCHÉ - SILVER CREEK WATERSHED**  
**FRESNO AND SAN BENITO COUNTIES**  
**CALIFORNIA**  
**GENERAL RANGE PRODUCTIVITY CLASSES**




**U.S.D.A. - SOIL CONSERVATION SERVICE**  
**DAVIS, CALIFORNIA**

**FIGURE 3**



the Griswold and Tumey Hills, which lowers the overall productivity of these areas for livestock forage.

Of particular concern with regard to low productivity is the 680 map unit which makes up the majority of Soil Association 8, and is the most seleniferous component of that association. This map unit produces only about 300 pounds per acre in an average rainfall year.

It should be noted here that the generalizations made on the range productivity map (Figure 3) do not accurately reflect the fact that areas of near zero production are often intermingled with areas of very high production. Thus, it would be extremely difficult and expensive to exclude livestock from the low production areas, while fully utilizing the high production areas.

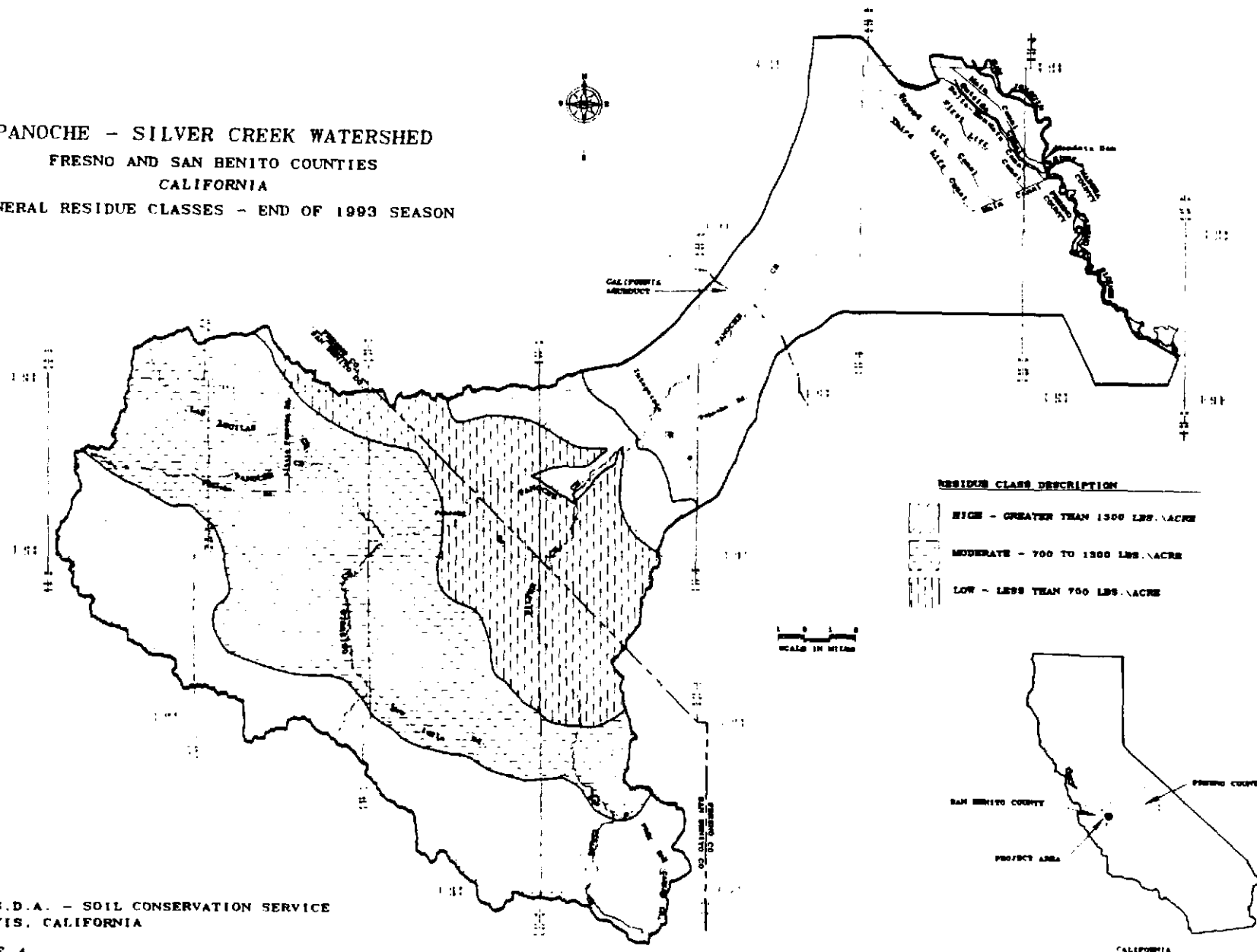
## **RANGE CONDITION**

An assessment of range condition based on residual dry matter was made during the summer months of 1993, primarily through ocular estimates, verified by a very limited number of clippings. The map (Figure 4) shows classes of residue as High (> 1300 lbs.), Moderate (700-1200 lbs.), and Low (< 700 lbs.). Due to the size of the watershed and the time involved, broad generalizations were made in mapping the residue. Relatively small areas of residue (or lack of it) that varied from the surrounding area were not mapped separately.

Residue classes were chosen based on Soil Conservation Service specifications for Proper Grazing Use on Annual Rangelands, which address erosion control as well as sustained forage production. The specifications call for a minimum of 700 to 1000 pounds per acre on sites with slopes of less than 30 percent, and between 1000 and 1200 pounds per acres on sites with slopes greater than 30 percent (USDA-SCS, 1976a). Using these criteria, some areas mapped as Low or Moderate fall into these categories because of the natural low productivity of the sites, rather than from overuse by livestock. Comparison of the residue, production, and soils maps should help determine areas where better livestock distribution and/or lower stocking rates might improve range conditions.

In assessing productivity and conditions of the range in this watershed, it should be remembered that the amount, timing, and distribution of rainfall plays a much larger role than management practices in determining the plant community and production from year to year (USDA-SCS, unpublished). It should also be noted that 1993 was an above average rainfall year, following a six-year drought.

PANOCHÉ - SILVER CREEK WATERSHED  
 FRESNO AND SAN BENITO COUNTIES  
 CALIFORNIA  
 GENERAL RESIDUE CLASSES - END OF 1993 SEASON



## RANGE MANAGEMENT PRACTICES

There are 21 Bureau of Land Management grazing allotments in the upper watershed under 17 different operators (Figure 5). The majority (twelve) are cow/calf operations. Of the remaining operations, four are stocker, three are sheep, one a combination sheep/stocker, and one horse (Boyle, 1991). Much of the privately owned land not within a grazing allotment is under ownership of one of the allotment lessees.

The type of operation generally corresponds with the quality of the range site. Sheep usually graze steep, rocky areas more uniformly than cattle; and stockers graze steep areas better than cows with calves (USDA-SCS, 1976a). Operators in the watershed seem to be taking advantage of these qualities in their choice of livestock for their allotment. No correlation was found between type of operation and range condition.

Complete data on fencing and watering facilities locations are available only for the Silver Creek allotment. This allotment has been the focus of most of BLM's range improvement projects in this watershed (Cotterill, 1993).

The stockwater facility locations map (Figure 6) was compiled from the Boyle Engineering Corp. report, BLM maps, and National Wetlands Inventory maps.

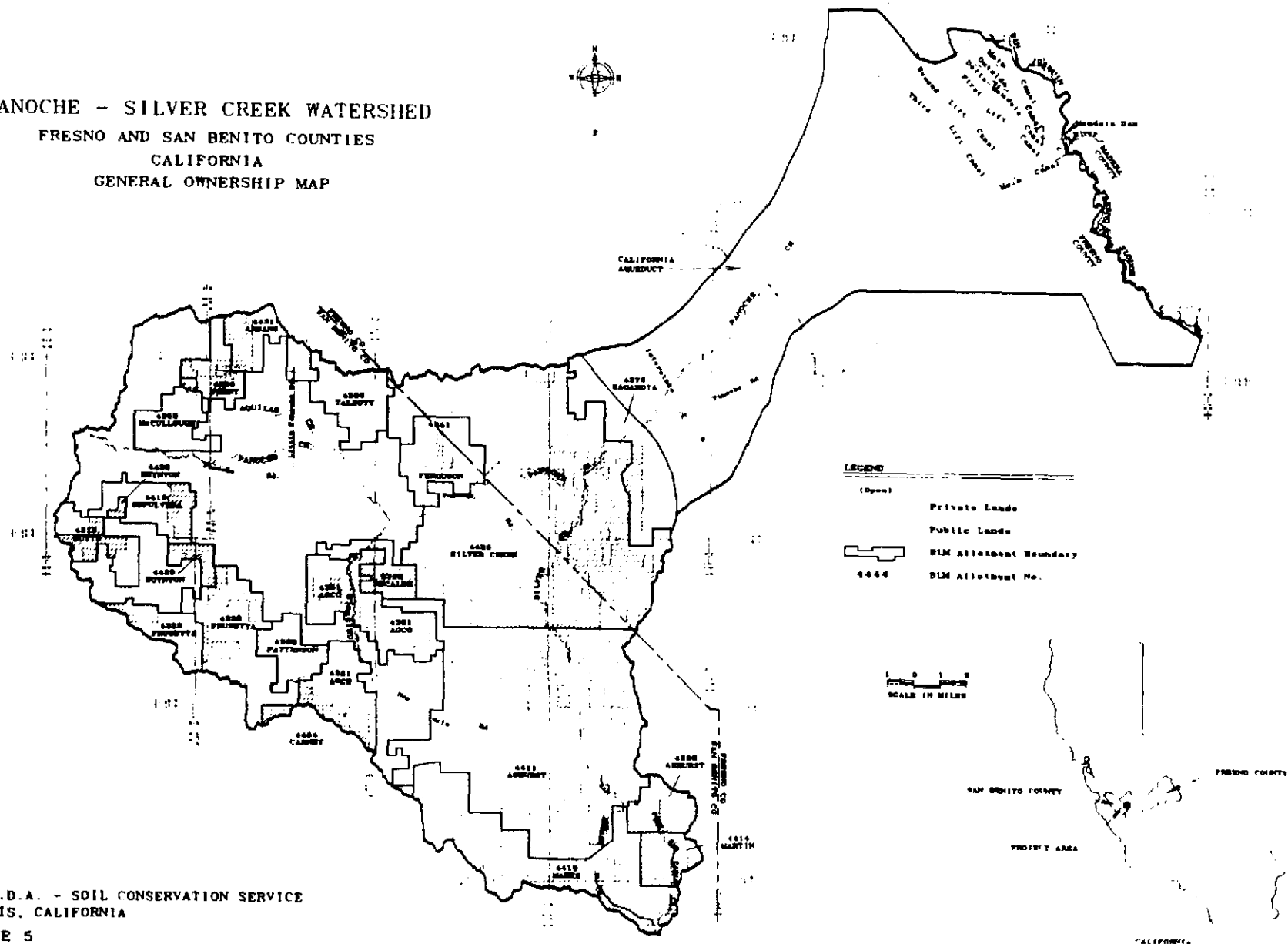
Generally speaking, land under the control of the same operator is fenced and cross fenced as a unit, without regard to the location of public lands within the unit (Cotterill, 1993). Watering facilities are often located near riparian areas, but since they are usually gravity-fed systems, the lowest point on the landscape may be the only feasible location. The same is true of corral and road locations (McDougald, 1993). Topography therefore limits the amount of distribution that can be accomplished with watering facilities alone.

Salt blocks and supplemental feeding locations were often observed adjacent to watering facilities. This practice has the potential to increase the already heavy use that occurs near water. For maximum livestock distribution, salt and supplemental feed should be located away from water locations, in an otherwise under-utilized area (USDA-SCS, 1976a). A project by California State University, Fresno at the San Joaquin Experimental Range had great success in reducing the impact of cattle in riparian areas, simply by moving supplemental feeding locations away from water sources into areas of high residual dry matter (Frost, et. al., 1990).

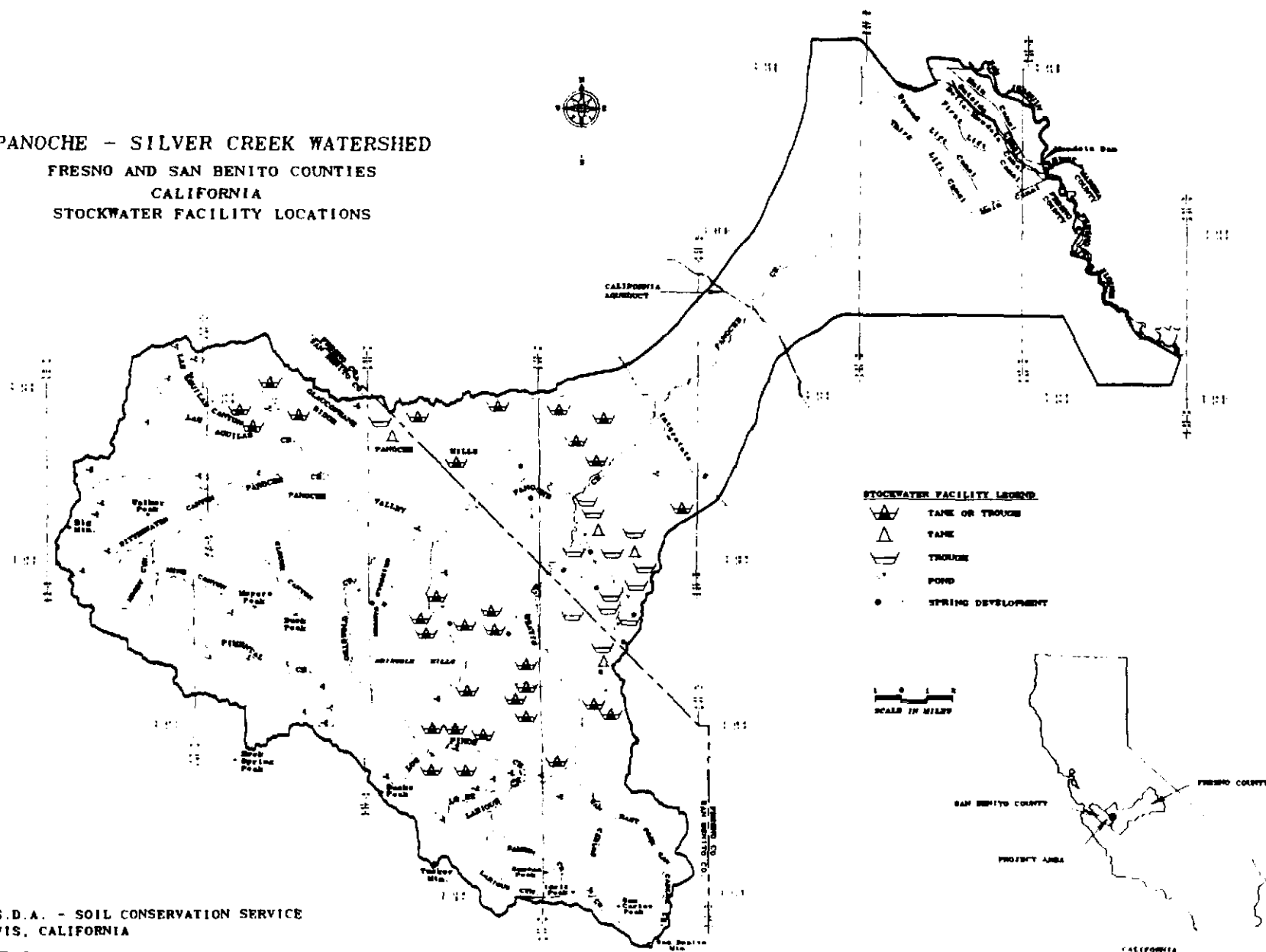
A terracing effect from numerous crisscrossing trails was observed on a number of steep slopes in the watershed, particularly in the Silver Creek drainage. While the trails would seem to indicate heavy use by livestock, they may also be attributable to wildlife. In any case, the terraces created actually slow run-off and seem to have no detrimental effect on productivity (Hansen, 1993 and Nelson, 1993).

Two riparian areas were observed in the upper watershed where management practices might make a significant difference in conditions (See

PANOCHÉ - SILVER CREEK WATERSHED  
FRESNO AND SAN BENITO COUNTIES  
CALIFORNIA  
GENERAL OWNERSHIP MAP



PANOCHÉ - SILVER CREEK WATERSHED  
FRESNO AND SAN BENITO COUNTIES  
CALIFORNIA  
STOCKWATER FACILITY LOCATIONS



U.S.D.A. - SOIL CONSERVATION SERVICE  
DAVIS, CALIFORNIA

FIGURE 6

## RIPARIAN ZONE CONDITION

An assessment of riparian zone condition was made using aerial photographs, National Wetlands Inventory maps, and Central Valley Riparian Mapping Project maps. Most riparian areas were also field checked. Condition was rated and mapped based on the amount, type, and diversity of vegetation; the adjacent land use; and the state of the stream channel and its hydrology (Figure 7). Condition classes were derived from assigning points for each of these factors, then averaging the total points as shown in Table 3.

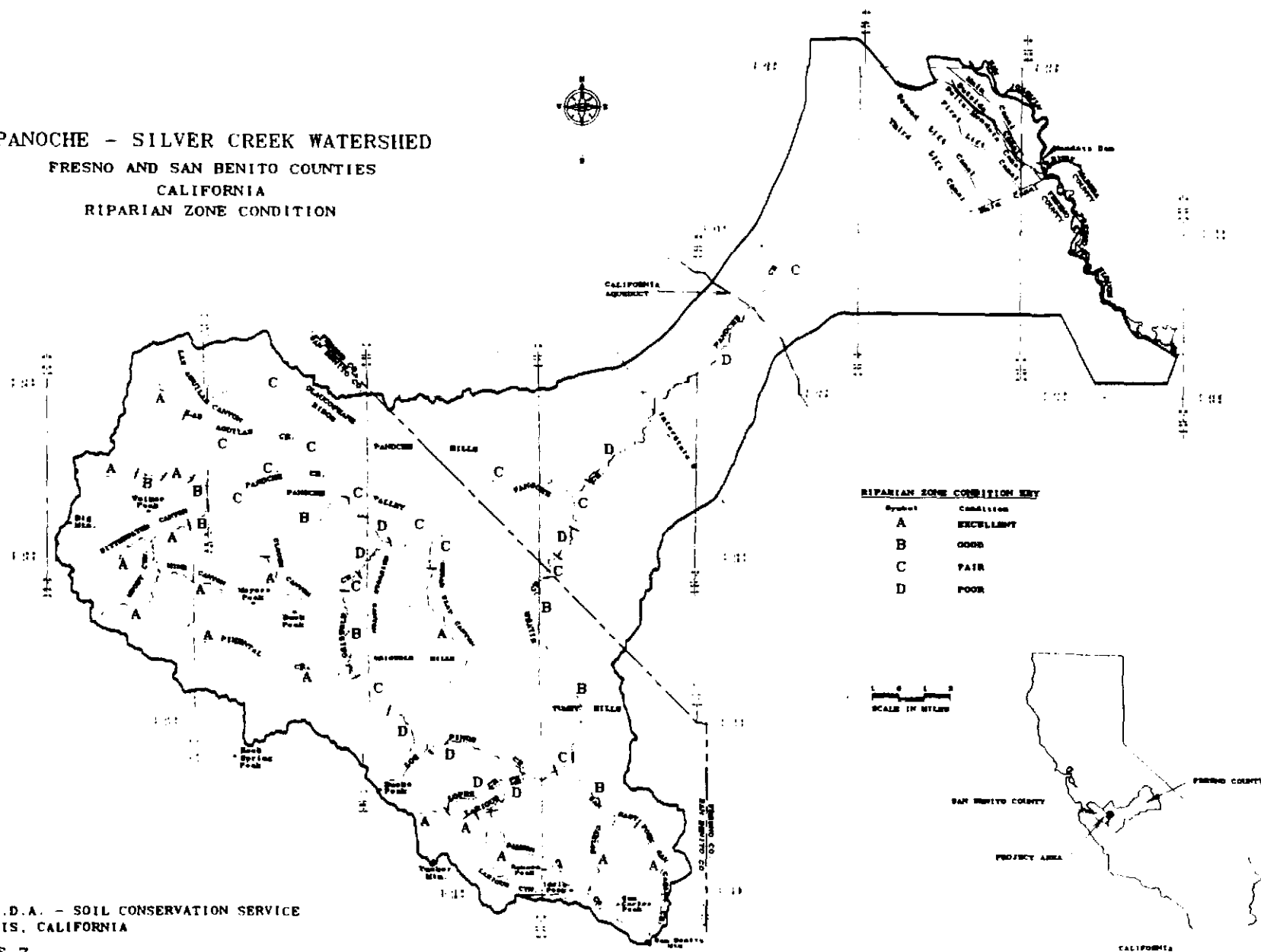
In general, riparian conditions in the upper watershed are good to excellent in the oak woodland and chaparral plant communities. In the grassland areas, conditions are variable. The most severely impacted areas are Vallecitos, Los Pinos, Lopez, and Larious Creeks in the Vallecitos Valley, Silver Creek between its confluence with Panoche Creek and the Fresno County line, and Panoche Creek between the confluence area and Interstate 5. Impacts to the Vallecitos Valley creeks and Silver Creek appear to result from a combination of heavy livestock use and poor soils. Impacts to Panoche Creek are the result of an in-stream gravel mining operation as well as numerous roads and off-road vehicle trails in and through the channel. In these areas, loss of vegetation has resulted in unstable banks which are actively eroding.

Significant impacts are also present in the Panoche and San Joaquin Valleys, partially due to cultivation adjacent to the riparian zones and the channelization of the streams for flood control or other reasons. Perhaps more significantly, the deep alluvial soils in these areas are prone to downcutting. The downcutting has resulted in near vertical banks and lowering of the water table. Rodent burrows in the banks contribute to the sediment load. Re-vegetation alone would probably not be successful or sufficient in these areas. Some type of engineered streambank protection will be necessary.

The invasion of exotic species in the streams of the watershed has also degraded the quality of the habitat. Exotics tend to out-compete native species by creating conditions that favor their own reproduction at the expense of other species, forming a monoculture (Van Cleve, et. al., 1989). Exotic species of concern in the Panoche/Silver Creek area are tamarisk (*Tamarix pentandra*), giant reed (*Arundo donax*), and tree tobacco (*Nicotiana glauca*). Patches of tamarisk were observed in the San Carlos-Silver Creek drainage, and in the channel of the lower watershed. A heavy infestation (monoculture) of tamarisk is found at the confluence of Panoche and Silver Creeks. Giant reed and tree tobacco are found intermittently in the lower watershed. Control of these exotics by cutting the stems and applying herbicide to the cut area could increase the diversity of vegetation and improve wildlife habitat in these areas, as well as preventing the problem from spreading further. A control program may need to be followed for several seasons and accompanied by planting of native species to be successful.

Still another degradation problem in some areas is the use of riparian zones for garbage dumps. This problem is especially severe in the channel of

PANOCHÉ - SILVER CREEK WATERSHED  
FRESNO AND SAN BENITO COUNTIES  
CALIFORNIA  
RIPARIAN ZONE CONDITION



U.S.D.A. - SOIL CONSERVATION SERVICE  
DAVIS, CALIFORNIA

FIGURE 7

Panoche Creek northeast of the California Aqueduct. There is also an area near the confluence of Panoche and Griswold creeks where old cars and farm equipment have been dumped, perhaps as a form of streambank stabilization, but the result is an eyesore. A demonstration project in this zone could clean up the junk in conjunction with the installation of more visually pleasing streambank protection measures. In the lower watershed, an entity needs to be found or created with responsibility for cleaning and maintaining the channel.

The channel in the lower watershed is densely vegetated downstream of the California Aqueduct. While this may exacerbate flooding problems by decreasing the amount of water the channel can carry, it also traps sediment and provides the only year-round habitat for wildlife in the predominantly intensively cultivated surrounding area.

## **SENSITIVE SPECIES**

Five threatened or endangered animal species occur in the watershed. Four are found primarily in the upper watershed: the San Joaquin kit fox, the giant kangaroo rat, the blunt-nosed leopard lizard (all federally endangered) and the San Joaquin antelope squirrel (state listed as threatened) (USDI-BLM, 1987; State of California Resources Agency, 1993). All these species originally inhabited the west side of the San Joaquin Valley, but are very rarely found there now, due to the conversion of the land to agricultural use (State of California Resources Agency, 1980). The bulk of the populations in the Panoche/Silver Creek watershed are found in the Panoche, Tumey, and Griswold Hills, and the Panoche Valley (State of California Resources Agency, 1992). These species are all highly adapted to extremely arid conditions; none of them are dependent upon riparian areas.

These species are, however, dependent upon each other. In particular, the giant kangaroo rat may be a "keystone" species; in other words, the condition and abundance of the rat's population may influence the condition and abundance of the population of the three associated species. Giant kangaroo rats and San Joaquin antelope squirrels are food sources for the San Joaquin kit fox. The squirrel and the blunt-nosed leopard lizard live in the burrow systems of the rats (USDI-BLM, 1987).

Season-long grazing and a concentration of large numbers of livestock in a small area, such as in sheep camps and around salt and water locations, may adversely impact these species, as may the use of rodenticides (USDI-BLM, 1987). Burrowing rodents generally benefit from grazing, however. The removal of vegetation allows them to see predators approaching, so they have time to take cover underground (Davis and Hamilton, 1993). Also, as with range productivity, wildlife populations are dependent more on annual rainfall patterns than any other variable (Williams, 1992).

The Bureau of Land Management currently manages public lands near the confluence of Panoche and Silver creeks and in the Tumey Hills for threatened and endangered species. Planned actions to achieve their



objective to protect, maintain, and improve habitat for the four animal species focus on maintaining a 200 foot buffer zone around rat colonies and kit fox dens. In addition, they are working to eliminate predator trapping and rodent poisoning on public land and are continuing to try to acquire more land in this area, especially within the Silver Creek allotment, through exchanges (USDI-BLM, 1987).

The fifth protected species is the giant garter snake; state listed as threatened and federally proposed as endangered (State of California Resources Agency, 1993). It occurs in the watershed near the city of Mendota and the Fresno Slough. It is one of the most aquatic of garter snakes, usually found in areas of permanent freshwater, but it will also use temporary water such as irrigation canals and flooded fields (State of California Resources Agency, 1980).

Since this species is associated with wetland habitat, it is of primary concern for potential adverse impacts from selenium. It has also been suggested that snakes are well suited for use as biological indicators of environmental pollution, because they are largely sedentary and have a limited home range (Bauerle, et. al. 1975; Stafford, et. al. 1976).

A study done by the California Department of Fish and Game in agroforestry plantations located near evaporation ponds in the San Joaquin Valley found no adverse impacts from selenium to reptiles, however concerns were raised over the potential negative impacts caused by bioaccumulation of selenium since snakes are completely carnivorous. Snakes collected from Kesterson National Wildlife Refuge after dead and deformed birds were found there did exhibit elevated levels of selenium (California Dept. of Fish & Game, 1993).

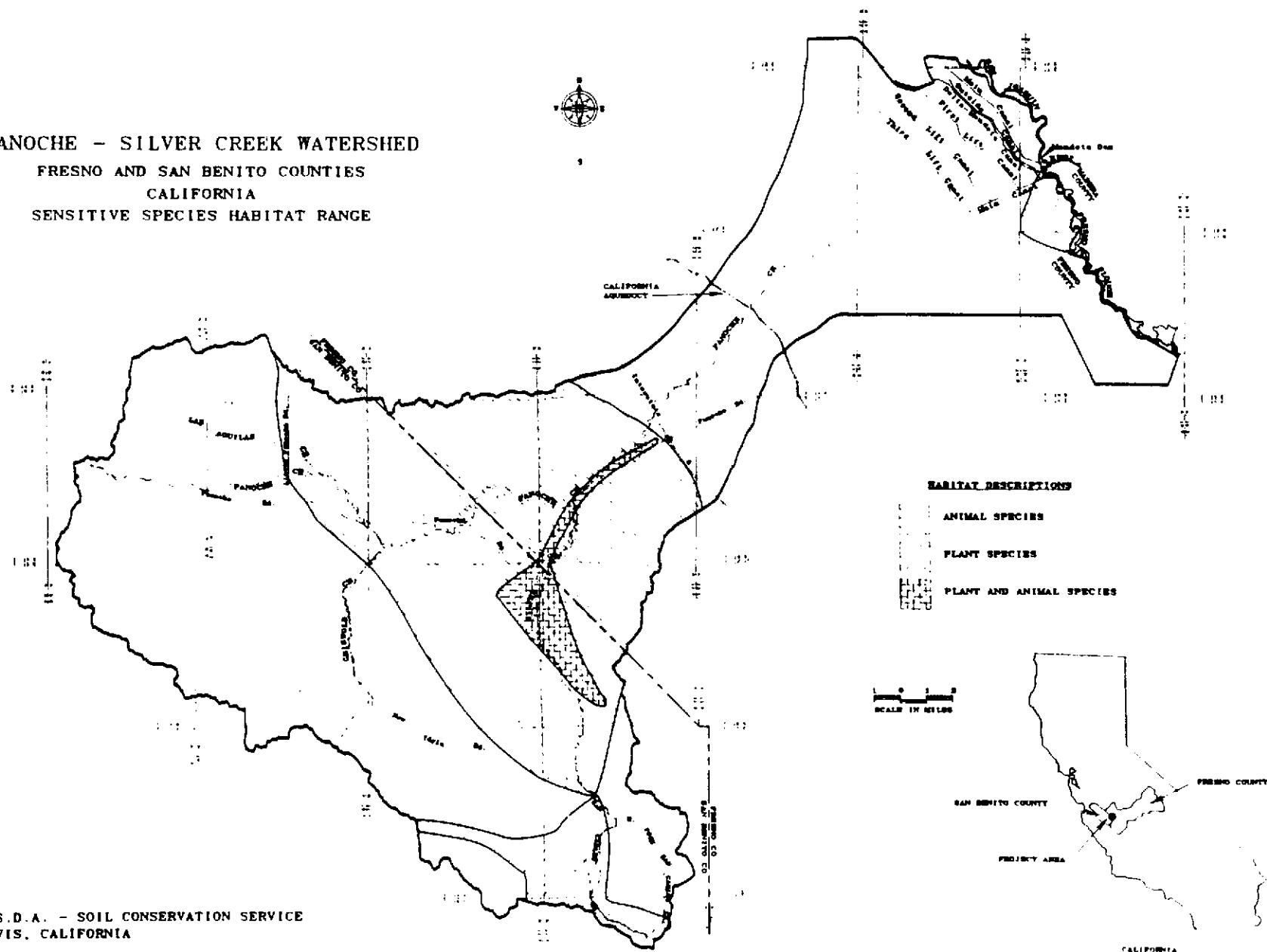
Sensitive plant species also occur in the watershed, and are usually associated with the Moreno formation. This formation is also the location of a "significant and irreplaceable" paleontological resource (USDI-BLM, 1987).

Legally protected plant species in the watershed are San Joaquin woolly-threads, federally listed as endangered; and Hoover's woolly-star and San Benito evening primrose, both federally listed as threatened. The San Joaquin woolly-threads and the Hoover's woolly star occur in the upper watershed in approximately the same locations as the four protected animal species. The San Benito evening primrose occurs in the extreme southeastern portion of the watershed in the Bureau of Land Management's San Benito Mountain Natural Area.

Adverse impacts to sensitive plant species can occur through long-term, severe surface disturbing activities such as camping, vehicle use, and trampling by humans and livestock. Some grazing, however, helps to maintain the successional stage at which these herbaceous species thrive. Here again, the annual rainfall pattern plays the major role in determining the population of these species from year to year (USDI-BLM, 1993a).

In addition to these legally protected species, a number of candidates for listing occur in the watershed. A complete listing of sensitive species and their status is found in Table 4.

**PANOCHÉ - SILVER CREEK WATERSHED**  
**FRESNO AND SAN BENITO COUNTIES**  
**CALIFORNIA**  
**SENSITIVE SPECIES HABITAT RANGE**



The habitat range map (Figure 8) was compiled from information from the California Department of Fish and Game, the Bureau of Land Management, and the San Joaquin Valley Endangered Species Recovery Planning Program. While these agencies maps show exact locations of actual sightings of sensitive species, the habitat range map attempts to connect these locations to show general areas where these species are most likely to occur.

## CONCLUSION

This inventory has revealed several areas of the watershed where improving resource conditions might help alleviate water quantity and quality concerns. Improvements can take the form of management practices, vegetation restoration, and structural practices.

In the category of management practices, grazing strategies for seleniferous soils and riparian zones could be developed. This improvement would seem to be most needed in the area covered by Soil Association 8; however, because this area has very low vegetation potential, reducing or even eliminating grazing in this area may have very little impact. Areas in Associations 9a, 9b, and 6 which had low residue levels and/or poor riparian zone conditions, but better productivity, may show more significant improvements from changes in management practices.

Vegetation restoration would have the greatest impact in the riparian zones graded "D". Management practices could be combined with planting of trees, eradication of exotics, and structures in these areas. Of particular concern for selenium transport are the portions of Silver and Panoche Creeks near their confluence graded "D" and adjacent to Soil Association 8.

Because water tables have dropped and banks are unstable, structural practices will be necessary to control erosion in downcut riparian zones, such as the Panoche/Griswold confluence area and Panoche Creek between Interstate 5 and the California Aqueduct. Once structures are in place, vegetation restoration could be considered.

The naturally low productivity of soils in Association 8 may limit successful vegetation restoration through seeding or management practices, therefore structures to trap sediment may also be necessary along or in the streams in this area.

**TABLE 1.**

**SELENIFEROUS SOILS**

<b>Soil Association Number and Name</b>	<b>Seleniferous Component(s) (Soil Series or Geologic Material)</b>	<b>Estimated Contribution to Total Se Load</b>
8. Badland- Torriorthents	Badland	80%
9a. Xerorthents- Exclosure-Grazer	Badland; Xerorthents, scarp; Rock Outcrop	20%
9b. Kettleman- Nacimiento- Linne	Badland? Sedimentary Rock Land?	?
11. San Benito- Gazos-Linne	Sedimentary Rock Land?	?

**SOIL ASSOCIATION DESCRIPTIVE TERMS**

<b>Slope</b>		<b>Textural Classes</b>	
<b>Description</b>	<b>Percent</b>	<b>Description</b>	<b>Class</b>
Nearly level	0-2	Loamy sand	Coarse
Gently sloping	2-5		
Moderately sloping	5-9	Sandy loam	Moderately coarse
Strongly sloping	9-15		
Rolling	9-15	Loam	Medium
Moderately steep	15-30		
Steep	30-50	Clay loam	Moderately fine
Very steep	> 50	Clay	Fine
<b>Depth Classes</b>		<b>Drainage</b>	
<b>Description</b>	<b>Inches</b>		
Very deep	> 60	Poorly	
Deep	40-60	Somewhat poorly	
Moderately deep	20-40	Moderately well	
Shallow	10-20	Well	
Very shallow	< 10	Somewhat excessively	
		Excessively	

**TABLE 2.**

**RANGE PRODUCTIVITY BY SOIL MAP UNIT**

<b>PRODUCTIVE</b> <b>&gt; 2000 lbs.</b>	<b>MODERATELY</b> <b>SUITED</b> <b>1500-2000</b>	<b>MARGINALLY</b> <b>SUITED</b> <b>1000-1500</b>	<b>SEVERLY LIMITED</b> <b>&lt; 1000 lbs./acre</b>
748	405	710	590
Climara	406	717	680
Landslides	408	718	746
Linne	451	719	960
Nacimiento	587	720	Henneke
Rincon	588	722	Montara
Salinas	715	737	
Sorrento	723	739	
Yolo	745	749	
	752	750	
	Gazos	Docas	
	Gaviota	Kettleman	
	Gullied	Los Banos	
	Pleasanton	Panhill	
	San Benito	Panoche	
	Santa Lucia	Shedd	
	Vallecitos	Soper	

**CLASS VIII--No productivity rating assigned**

950  
Badland  
Igneous rock land  
Mine pits and dumps  
Riverwash  
Sedimentary rock land

**TABLE 3.****RIPARIAN ZONE CONDITION**

<b>PTS.</b>	<b>VEGETATION Cover</b>	<b>Diversity</b>	<b>ADJACENT LAND USE</b>	<b>CHANNEL/ HYDROLOGY</b>
1	Bare	--	Instream Roads/Mining	Highly Disturbed
2	Sparse	Invasive Exotics	Agriculture/ modified channel	Deeply cut; Steep, ero- ding banks
3	Medium	Poor	Agriculture/ non-modified channel	Constrained; Engineered
4	Dense	Fair	Grazing	Braided
5	Very Thick	Good	Wildland/ Reserve	Meandering

Points were assigned in each category for every reach of stream, added together, then averaged to place the reach in a condition category as shown below:

<b>Points</b>	<b>Condition</b>	<b>Map Symbol</b>
4.5-5.0	Excellent	A
3.5-4.4	Good	B
2.5-3.4	Fair	C
1.5-2.4	Poor	D
1.0-1.4	Very poor	F

TABLE 4.

## SENSITIVE SPECIES

SPECIES Common name ( <i>Scientific name</i> )	STATUS Federal/State
<b><u>ANIMALS</u></b>	
Blunt-nosed leopard lizard ( <i>Gambelia silus</i> )	FE/SE
Giant kangaroo rat ( <i>Dipodomys ingens</i> )	FE/SE
San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	FE/ST
Giant garter snake ( <i>Thamnophis couchii gigas</i> )	FPE/ST
San Joaquin antelope squirrel ( <i>Ammospermophilus nelsoni</i> )	C2/ST
San Joaquin dune beetle ( <i>Coelus gracilis</i> )	C1/--
Golden eagle ( <i>Aquila chrysaetos</i> )	C2/SSC
Western pond turtle ( <i>Clemmys marmorata</i> )	C2/SSC
San Joaquin pocket mouse ( <i>Perognathus inornatus</i> )	C2/--
<b><u>PLANTS</u></b>	
San Joaquin wooly-threads ( <i>Lembertia congdonii</i> )	FE/--
San Benito evening primrose ( <i>Camissonia benetensis</i> )	FT/--
Hoover's wooly-star ( <i>Eriastrum hooveri</i> )	FT/--
Green fiddleneck ( <i>Amsinckia furcata</i> )	C2/--
Lost Hills saltbush ( <i>Atriplex vallicola</i> )	C2/--
Talus fritillary ( <i>Fritillaria falcata</i> )	C2/--
San Benito fritillary ( <i>Fritillaria viridea</i> )	C2/--
Rayless layia ( <i>Layia discoidea</i> )	C2/--
Mt. Diablo phacelia ( <i>Phacelia phacelioides</i> )	C2/--
Jared's peppergrass ( <i>Lepidium jaredii</i> )	BLM

**STATUS CODES**

F = Federal   S = State   E = Endangered   T = Threatened   P = Proposed

C1 = Candidate for federal listing; sufficient information exists to warrant listing

C2 = Candidate for federal listing; insufficient information available to permit listing

BLM = Bureau of Land Management sensitive species

SSC = Dept. of Fish &amp; Game species of special concern

## REFERENCES

- Arroues, Kerry. 1993. Soil Scientist, Hanford Soil Survey Office, USDA-Soil Conservation Service. Letter to Panoche/Silver Creek CRMP interested parties; 6pp.
- Bauerle, B., D.L. Spencer, and W. Wheeler. 1975. The use of snakes as pollution indicator species. *Copeia* 1975: 366-368.
- Boyle Engineering Corporation. 1991. Evaluation of general resource conditions. Panoche/Silver Creek Watershed Management Plan. Figure 5-6, Table 5-8.
- California Department of Fish and Game. 1993. Selenium in wildlife from agroforestry plantations in the San Joaquin Valley. Draft of a report to the California Department of Water Resources; 49pp.
- Chaney, E., W. Elmore, and W.S. Platts, 1990. Livestock grazing on western riparian areas. Eagle, ID: Northwest Resource Information Center; pp. 24-25.
- Cotterill, Bruce, 1993. Range Conservationist, Hollister Resource Area, USDI-Bureau of Land Management; personal interview.
- Davis, M. and L. Hamilton. 1993. Field Biologists, San Joaquin Valley Endangered Species Recovery Planning Program; personal interview.
- Frost, W.E., N.K. McDougald, and D.E. Jones. 1990. Use of supplemental feeding locations to manage cattle use on riparian areas of hardwood rangeland. In: Beef and Range Workgroup Report. Davis, CA: University of California Cooperative Extension; p. 29.
- Hansen, Jeff. 1993. former Area Range Conservationist, Soil Conservation Service, Fresno; personal interview.
- Katibah, E.F., N.E. Nedeff, and K.J. Dummer. 1981. Current condition of riparian resources in the Central Valley of California. In: R.E. Warner and K.M. Hendrix, eds. *California Riparian Systems*. Berkeley, CA: Univ. of California Press; pp. 314-321.
- Klingebiel, A.A. and P.H. Montgomery. 1973. Land-capability classification. USDA-Soil Conservation Service Agricultural Handbook No. 210; 21pp.
- Leathers, Mike. 1993. Hollister Resource Area, USDI-Bureau of Land Management; personal interview.
- McDougald, Neal. 1993. Livestock and Range Farm Advisor, Univ. of Calif. Cooperative Extension, Madera County; personal interview.
- Nelson, Aaron. 1993. Farm Advisor, Univ. of Calif. Coop. Ext., Fresno County; personal interview.



Nelson, C.W. and J.R. Nelson. 1981. The Central Valley Riparian Mapping Project. In: R.E. Warner and K.M. Hendrix, eds. California Riparian Systems. Berkeley, CA: Univ. of California Press; pp. 307-313.

Presser, T.S., W.C. Swain, R.R. Tidball, and R.C. Severson. 1990. Geologic sources, mobilization, and transport of selenium from the California coast ranges to the western San Joaquin Valley: a reconnaissance study. USGS Water-Resources Investigation Report 90-4070: Menlo Park, CA. 66pp.

Slavin, Tracy. 1993. Water Management Specialist, Westlands Water District; personal interview.

Stafford, D.P., F.W. Plapp, Jr., and R.R. Fleet. 1976. Snakes as indicators of environmental contamination: relation of detoxifying enzymes and pesticide residues to species occurrence in three aquatic ecosystems. Arch. Environ. Contam. Toxicol., 5: 15-27.

State of California Resources Agency, Dept. of Fish and Game. 1993. State and Federal Endangered and Threatened Animals of California; pp. 4-6.

State of California Resources Agency, Dept. of Fish and Game, Natural Heritage Division. 1992. RT&E Element Occurrences; map, scale 1:1,300,000.

State of California Resources Agency-Fish and Game Commission and Dept. of Fish and Game. 1980. At the Crossroads-a report on California's rare fish and wildlife; pp.73, 117, 123, 135.

USDA-Soil Conservation Service, unpublished. Soil Survey of Western Fresno County, California; preliminary data from survey in progress.

USDA-Soil Conservation Service. 1976a. National Range Handbook. Washington, D.C.

USDA-Soil Conservation Service. 1976b. Panoche-Silver Creek Watershed Investigation Report. Davis, CA. pp. 1-6, Figure 1.

USDA-Soil Conservation Service. 1969. Soil Survey of San Benito County, California; 111p.

USDI-Bureau of Land Management, Bakersfield District, Hollister Resource Area. 1993a. Draft-Clear Creek Management Area Resource Management Plan and Environmental Impact Statement. 118pp. plus appendices and maps.

USDI-Bureau of Land Management, Hollister Resource Area. 1993b. Silver Creek/Panoche Creek Watershed Sensitive Plant and Animal Locations. Map, scale 1:75,000.

USDI-Bureau of Land Management, Bakersfield District. 1987. Management Plan for the Panoche/Coalinga Area of Critical Environmental Concern; 25pp.

Van Cleve, D.H., L.A. Comrack, and H.A. Weir. 1989. Coyote Creek (San Diego County) Management and Restoration at Anza-Borrego Desert State Park, pp. 149-153. In: *Proceedings of the California Riparian Systems Conference: Protection, Management and Restoration for the 1990s*. Sept. 22-24, 1988, Davis, CA. USFS Gen. Tech. Rep. PSW-110.

Williams, Daniel F. 1992. Population studies of giant kangaroo rats. Progress Report FG1256 submitted to California Dept. of Fish and Game, Sacramento, CA. 10pp.

Date: 10/28/93

WATER BODY FACT SHEET

Region: 5

Water Body Name: PANOCHE CREEK

Hydrologic Unit No.:

Total Areal Extent: 1 MI

Type of Resource: Rivers and Streams

Clean Water Strategy Rating

Resource Values:

Uniqueness:

Magnitude of Use:

SUMMARY OF PROBLEM(S) OR CONCERN(S)

Type of Problem/Issue: Sedimentation

Location: Near boundary between Merced and Fresno Counties.

Selenium

Aquatic life impairment

Problem/Issue(s) and Source Description: Panocha is an intermittent stream which contributes substantial sediment loads downstream due to overgrazing of the watershed. Selenium is transported within the sediment. Mercury levels exceed water quality criteria; source is the Silver Creek tributary with its up stream mine.

	Concern 1	Concern 2	Concern 3
Specific Location:	Entire Creek	: Entire Creek 1	: Entire Creek 2
Type of Pollutants/Parameters:	SED	: SELENIUM	: MERCURY
Method of Assessment:	Best Professional Judgment	: Measured	: Measured
Water Quality Impaired or Threatened?:	Impaired - 1	: Impaired - 1	: Impaired - 1
Major Beneficial Use Category Affected:	Aquatic	: Aquatic	: Aquatic
Type of Source(s):	AGRI	: AGRI	: MINE
Areal Extent:	1e MI	: 1e MI	: 1e MI
Programs Affected:	NPS, MONITOR, SPEC-INV	: NPS, MONITOR, SPEC-INV	: NPS, MONITOR, SPEC-INV

	Concern 4	Concern 5	Concern 6
Specific Location:	:	:	:
Type of Pollutants/Parameters:	:	:	:
Method of Assessment:	:	:	:
Water Quality Impaired or Threatened?:	:	:	:
Major Beneficial Use Category Affected:	:	:	:
Type of Source(s):	:	:	:
Areal Extent:	:	:	:
Programs Affected:	:	:	:

e = areal extent of problem is estimated

Date Last Updated: 10/28/93

TEL NO.

JUL 00:00 AM '93

APR 16 '96 01:28PM US EPA SF

## SHUTE, MIHALY & WEINBERGER

ATTORNEYS AT LAW

396 HAYES STREET

SAN FRANCISCO, CALIFORNIA 94102

TELEPHONE: (415) 552-7272

TELECOPIER: (415) 552-5816

E. CLEMENT SHUTE, JR.  
MARK I. WEINBERGER  
MARC B. MIHALY, P.C.  
FRAN M. LAYTON  
RACHEL B. HOOPER  
ELLEN J. GARBER  
CHRISTY H. TAYLOR  
TAMARA S. GALANTER  
ELLISON FOLK  
RICHARD S. TAYLOR  
SUSANNAH T. FRENCH  
WILLIAM J. WHITE  
SUSAN A. AUSTIN  
AARON S. ISHERWOOD  
ROBERT S. PERLMUTTER

LAUREL L. IMPETT, AICP  
URBAN PLANNER

ELIZABETH M. DODD  
OF COUNSEL

## RESUME

Shute, Mihaly & Weinberger is a law partnership formed in 1980 to practice government, environmental, natural resources, land use, and appellate law. The firm offers a full array of litigation, counseling and planning services, and works regularly with technical consultants in a broad range of disciplines. The firm also has an urban planner who works with public agencies and other clients in land use disputes, planning efforts, and the environmental review and permitting process.

Shute, Mihaly & Weinberger specializes in the following areas:

- Land Use Issues (including General Plan, Zoning, Subdivision Map Act, Development Agreement and Open Space Matters)
- Takings Defense and Exactions
- California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA)
- Initiative and Referendum
- Solid Waste
- Hazardous and Toxic Materials
- Affordable Housing
- Water Issues and Wetlands
- Air Quality and Transportation
- Municipal Financing and Taxation
- Other practice areas, including public agency administration, redevelopment law, and legislative drafting and analysis

Shute, Mihaly & Weinberger serves as special counsel to numerous local governments and other public agencies. The firm provides advice regarding environmental and land use matters and compliance with environmental laws. It also represents public entities in negotiations with state and federal regulatory agencies, and drafts and negotiates contractual agreements concerning land use and development, settlement or avoidance of litigation, and real estate transactions. In addition, the firm brings and defends litigation on behalf of public agencies.

## AREAS OF PRACTICE

### Land Use Issues

The firm provides advice on and brings and defends litigation involving all aspects of general planning and zoning requirements, as well as specific plans, use permits, variances, and local government reorganization under the Cortese-Knox Act. Members of the firm have participated in drafting local general plans and zoning ordinances, LAFCO guidelines, and state legislation concerning general plans and zoning requirements. The firm also negotiates development agreements and participates in other complex land use negotiations.

- The firm assisted the City of Berkeley in preparation of general plan amendments and a specific plan to preserve open space on the privately held portions of the Berkeley Waterfront. The firm also successfully defended the plan against litigation and assisted the City in working with other cities, the East Bay Regional Park District and the State to implement an East Bay shoreline park.
- The firm advised the cities of Benicia, Fairfield, and Vallejo in developing a long term planning strategy for open space lands between the three cities and now serves as general counsel to the Tri-City and County Cooperative Planning Group, a joint powers agency comprised of the three cities and Solano County. The Group is responsible for developing and implementing an agriculture and open space preservation plan for a 10,000 acre open space area. The firm drafted the joint powers agreement establishing the Group and advises the group in connection with plan preparation and administration, compliance with the California Environmental Quality Act, acquisition of land and open space easements, and other matters arising in the course of agency administration.
- After bringing litigation on behalf of the City of Livermore challenging the approval of major development in the unincorporated area south of Livermore, the firm negotiated a complex settlement agreement among the City, Alameda County and private landowners that launched a cooperative planning process which will result in permanent protection of a substantial portion of the South Livermore Valley for agricultural use.
- The firm represented the City of Sacramento in negotiating a development agreement concerning mixed use redevelopment of the 240-acre Southern Pacific Railyards adjacent to the City's downtown. The issues negotiated by the parties included phasing, major public facilities financing, design standards, vested rights, assignment rights, liability and hazardous materials remediation. The principles of agreement were memorialized in a Preliminary Agreement between the City and Southern Pacific Transportation Company, as well as in the specific plan and special zoning ordinance for the area. The firm also represented the City in negotiations with the property owners in the remainder of the 1000-acre Railyards/Richards Boulevard Redevelopment Area concerning

the plan for redevelopment. The firm advised the City on environmental review and planning issues throughout the planning process.

- The firm provided legal advice to the City of Malibu regarding the City's adoption of its first general plan. The firm worked with the City to develop strategies for protecting the environment and avoiding unconstitutional takings of private property.

## **Takings Defense and Exactions**

The firm defends public entities in takings challenges and other related challenges, such as alleged equal protection and due process violations under 42 U.S.C. Section 1983. The firm also advises public entities on how to avoid takings and assists public entities with nexus studies to support desired regulations and exactions.

- The firm assisted the City of Sacramento in preparing a nexus study, drafting a low income housing fee ordinance, and then successfully defending litigation challenging the ordinance. Commercial Builders of North America v. City of Sacramento, 941 F.2d 872 (9th Cir. 1991), cert. denied. The district court granted the City's motion for summary judgment and found that the ordinance, challenged by a building industry association, did not constitute a taking and did not violate the due process and equal protection clauses. The Ninth Circuit upheld the district court decision, and the Supreme Court denied review.
- The firm represented the City of Tiburon before the United States Supreme Court in Agins v. City of Tiburon, 447 U.S. 255 (1980), in which the landowner alleged that the City's large lot open space zoning ordinance had taken its land. The Court endorsed the open space purposes of the ordinance and unanimously upheld the City's actions.
- The firm successfully defended Santa Cruz County in a takings challenge to its mobile home rent control ordinance. De Anza Properties, Ltd. v. County of Santa Cruz, 936 F.2d 1084 (9th Cir. 1991). The Ninth Circuit upheld the district court's decision granting the County's motion for summary judgment on the grounds that the plaintiff's challenge was barred by the statute of limitations.
- The firm represented East Bay Regional Park District in takings actions filed by a developer in both state and federal courts for alleged inequitable precondemnation activity and regulatory takings. The state court of appeal upheld the state trial court's decision sustaining the District's demurrer and imposing sanctions against plaintiffs for filing a frivolous lawsuit. Likewise, the Ninth Circuit Court of Appeals upheld the federal district court's decision granting the District's motion to dismiss the federal action on both Younger abstention and ripeness grounds.

## **California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA)**

The firm provides consultation regarding CEQA and NEPA compliance and brings and defends CEQA and NEPA litigation on behalf of local and state government agencies and citizens' groups. Members of the firm have participated in drafting CEQA legislation, reviewed and commented on proposed amendments to CEQA, and assisted the Resources Agency in drafting the CEQA Guidelines. Firm members also have taught CEQA and NEPA courses at law schools, planning seminars and attorney continuing education conferences.

- The firm advises the University of California, Davis campus, on numerous CEQA compliance issues related to development, and has assisted in preparing seven EIRs for the campus. The firm also has defended five CEQA lawsuits on behalf of the Davis campus. In addition, the firm served as special counsel to the University for its preparation of an EIR for selection of a new University of California campus in the central region of the state. The firm advised the University on CEQA and other legal issues pertaining to site selection, reviewed consultant drafts of the EIR, and drafted mitigation measures, responses to comments and findings for the project. The firm also assisted the University in its preparation of a revised EIR for its San Francisco campus following the California Supreme Court's decision in Laurel Heights v. Regents of the University of California, and assisted in the litigation successfully defending the revised EIR.
- The firm is advising the San Francisco Redevelopment Agency ("SFRA") in connection with SFRA's preparation of a joint EIR/EIS with the federal General Services Administration ("GSA") for construction of a federal office building in downtown San Francisco. The firm negotiated a memorandum of understanding with GSA regarding the procedure for preparation of the EIR/EIS and resolution of interagency disputes, and provided advice regarding the interrelationship between CEQA and NEPA. The firm also assisted in the EIR/EIS scoping and the determination of approaches for evaluation of potential impacts, reviewed consultant drafts for legal adequacy, and drafted mitigation policies.
- On behalf of the East Bay Municipal Utility District, the firm successfully challenged Contra Costa County's approval of an 11,000-home development in the Dougherty Valley, persuading the trial court that the environmental impact report ("EIR") failed to consider adequately the availability of water and impacts to the local water supply in violation of CEQA. As a result, the court set aside the project approval. The firm also successfully represented the cities of Danville, San Ramon, Pleasanton, and Walnut Creek, and several environmental groups in separate litigation challenging other aspects of the County's CEQA compliance in connection with the same project.

## Initiative and Referendum

The firm represents public entities in litigation challenging adopted initiatives and referenda affecting land use issues, such as management of future growth and preservation of agricultural and open space lands. The firm also drafts local initiative measures and referenda.

- The firm successfully defended Napa County in litigation under the state planning law challenging a citizen initiative to protect farmland in the County. The firm drafted the initiative and was retained by the County to defend the measure in litigation brought by the Pacific Legal Foundation, a building industry association, and local landowners. The trial court found that the initiative was not preempted by state planning laws. The court of appeal affirmed the trial court; the state Supreme Court granted review and affirmed the court of appeal decision. DeVita v. County of Napa, 9 Cal.4th 763 (1995). The firm represented the County throughout the litigation.
- The firm drafted and in cooperation with Orange County successfully defended an initiative that establishes a planning process for reuse of a military airforce base designated for closure. The trial court held that aviation law did not preempt the initiative, and that the initiative did not violate the County's general plan.
- The firm has assisted numerous other cities and counties in defending legal challenges to adopted land use initiatives. Published decisions include Garat v. City of Riverside, 2 Cal.App.4th 259 (1991), and Leshar Communications, Inc. v. City of Walnut Creek, 52 Cal.3d 531 (1990).
- The firm drafted and assisted in drafting numerous initiatives and referenda, including City of Fremont Measure A (1981), Solano County Measure A (1984), Yolo County Measure G (1990), Morgan Hill Measure C (1990), Napa County Measure J (1990), San Diego County Proposition C (1993), Stanislaus County Measure F (1993), Amador County Measure A (1994), Orange County Measure A (1994), the update for Solano County Measure A (1994), and City of Saratoga Measure G (1996).

## Solid Waste

The firm advises public agencies on solid waste management and recycling issues. The firm has expertise in the California Integrated Waste Management Act and the regulations and practices of the California Integrated Waste Management Board, local air quality management districts and the State and Regional Water Quality Control Boards.

- The firm serves as general counsel to the Alameda County Waste Management Authority ("ACWMA"), a joint powers agency comprised of Alameda County,



two sanitary districts, and all the cities in Alameda County. ACWMA is responsible for preparing and implementing the County Integrated Waste Management Plan and Hazardous Waste Management Plan, solid waste facility siting, and assisting member agencies in matters pertaining to solid and hazardous waste management. The firm advises ACWMA in these areas on an ongoing basis and provides legal services in connection with a wide range of public agency matters such as Brown Act and Public Records Act compliance, conflicts of interest, land acquisition, and public contracts.

- The firm has extensive experience advising public agencies in negotiating, drafting, and enforcing waste collection and disposal agreements. On behalf of the ACWMA, the firm evaluated all member agency franchise agreements to identify opportunities for influencing waste flow and to develop strategies for franchise renewal negotiations. In addition, the firm advised Riverside County and the Del Norte Solid Waste Management Agency in drafting new franchise agreements, represented the City of Mountain View in a dispute with a franchised solid waste hauler regarding the scope of its franchise agreement, and served as an expert witness on behalf of the City of Fairfax in litigation concerning the nature and scope of waste collection franchises.
- The firm provides ongoing representation to the City of Mountain View regarding permitting, landfill closure and other regulatory requirements associated with owning a large landfill operation. In addition, the firm advises the City on interim and end uses for its landfill sites as well as compatibility with adjacent uses. The firm advises the ACWMA regarding that agency's design, permitting, and development of a greenwaste/biosolids co-composting facility.

## **Hazardous and Toxic Materials**

The firm is well-versed in hazardous materials law and the redevelopment of contaminated properties (brownfields), including development of land use-based cleanup strategies, minimization of risks to future landowners, implications for financing, and the powers of local agencies to direct remediation. The firm regularly works with the California Environmental Protection Agency, Department of Toxic Substances Control ("DTSC"), various Regional Water Quality Control Boards, and local hazardous materials regulatory officials.

- The firm represented the City of Sacramento regarding potential development of the Southern Pacific Railyards/Richards Boulevard redevelopment area. The proposed plan involved large-scale, mixed-use development adjacent to the City's downtown area. The firm advised the City on the cleanup of hazardous materials at the superfund site located on the Southern Pacific property, retained and worked with hazardous materials experts, represented the City in negotiations with Southern Pacific and DTSC over cleanup standards, drafted a Memorandum of Understanding between the City, DTSC and Southern Pacific regarding ongoing land use authority over the site, and drafted the Hazardous

Substances element for the Railyards Specific Plan and a development agreement to govern development and cleanup of the 240 acre site.

- The firm represents the City of Benicia with regard to the operations and subsequent closure of a Class I hazardous waste facility adjacent to Benicia. In response to litigation claiming that state hazardous waste law preempted the exercise of the County's local land use authority, the firm authored an amicus brief on behalf of fifteen California cities and counties in support of Solano County's authority to require IT Corporation to comply with the County's land use permit. The court ruled for the County. IT Corporation v. Solano County, 1 Cal.4th 81 (1991).
- The firm represents the City of Mountain View, and has represented the Whisman School District, with regard to the interrelationship between the Teledyne/Spectra-Physics Lasers ground water plume (a federal Superfund site), the City's landfill operations, redevelopment and use of affected City property, and cleanup of the School District's leaking underground storage tanks.

## **Affordable Housing**

The firm represents cities, counties and redevelopment agencies in connection with constitutional and regulatory issues associated with affordable housing.

- The firm provided drafting assistance and legal advice to the City of Sacramento and the Sacramento Housing Redevelopment Agency regarding the creation of affordable housing through a Sacramento Housing Trust Fund. The firm worked with the Agency in the selection of a consultant to prepare a nexus report, defining the legal requirements for the report, and in developing an analytic approach to satisfy those requirements. In collaboration with Agency staff and the Department of City Planning, the firm drafted the Housing Trust Fund Ordinance and advised the Agency during the hearing process. The firm also successfully defended litigation challenging the ordinance.
- The firm drafted an inclusionary housing and affordable housing trust fund ordinance for San Luis Obispo County. The firm identified alternative approaches to inclusionary housing used by other jurisdictions in California, worked with County staff and consultants to identify a conservative nexus for imposition of the inclusionary housing requirement, prepared options papers for County staff, and drafted a final ordinance and accompanying findings for approval by the Board of Supervisors.

## **Water Issues and Wetlands**

The firm works on a wide variety of cases involving water quality, water rights, wetlands, public trust and coastal issues. The firm has expertise in the Clean Water Act, Porter-Cologne Water Quality Control Act and regional water quality regulations and standards.

- The firm serves as counsel to the Sacramento Area Water Forum, which is engaged in an innovative effort to solve regional long term water supply problems through a mediator-led negotiation process. The Water Forum is a stakeholder coalition including the County of Sacramento, the cities within the County, water districts, business, labor, agricultural interests, and environmental groups. The Forum seeks to formulate a Water Plan that will provide the region with a safe and reliable long term water supply while preserving the fishery, wildlife, recreational and aesthetic values of the Lower American River.
- The firm represents the Sacramento Area Flood Control Agency ("SAFCA"), a joint powers agency including the City of Sacramento, Sacramento County, Sutter County, the American River Flood Control District, and Reclamation District 1000. SAFCA is responsible for planning and implementing flood protection measures in the Sacramento region. The firm has advised SAFCA with regard to such matters as compliance with the California Environmental Quality Act, the National Environmental Policy Act, and state and federal endangered species acts. The firm assisted SAFCA in obtaining a Clean Water Act section 404 permit for the proposed construction of a \$30 million levee improvement project between the Sacramento and American Rivers. The firm has also advised SAFCA in its efforts to obtain state and federal support for regional flood protection and to develop local development fees and other cost recovery programs to finance local flood control programs.
- Clem Shute serves as referee to the Los Angeles Superior Court in the Ballona Wetlands dispute in Los Angeles, working with the parties to reach a solution to regulatory problems involving numerous public and private entities.
- The firm prepared a handbook for local governments and citizens' groups that addresses local, state and federal wetlands regulations, and provides advice on techniques local governments can use to protect wetlands within their jurisdictions.

## **Air Quality/Transportation**

The firm provides representation to public entities on air quality and transportation issues. The firm regularly works with regional air quality management districts and has expertise in the state and federal Clean Air Acts.

- The firm represents the South Coast Air Quality Management District in the defense of air quality regulations adopted by the District to reduce air pollution emissions. For example, working with District Counsel, the firm has defended challenges to air emissions limitations on architectural coatings, aerosol coatings, hydrogen fluoride, and barbecue charcoal lighter materials and related products.
- The firm has represented the County of Santa Cruz in connection with its regulation of a sand quarry operation. The firm worked extensively with the Monterey Bay Unified Air Pollution Control District and the County's air quality consultant on analyzing impacts from the quarry operation, particularly concerns regarding PM10 and crystalline silica emissions.
- The firm has represented numerous public agencies and citizens' groups in challenges to transportation agencies' approvals of freeways and major thoroughfares, including the Hatton Canyon Freeway in Monterey County and the San Joaquin Hills Transportation Corridor and Eastern Transportation Corridor in Orange County.

## **Municipal Financing and Taxation**

The firm advises public agencies on methods for funding public projects, including taxation, assessment districts and development fees.

- The firm successfully defended an assessment district formed by the City of San Buenaventura to perform dredging and maintenance of boat channels in a waterfront subdivision. The lawsuit included allegations of illegal taxation under Proposition 13. The firm also advised the City throughout the assessment district formation process.
- The firm is currently advising a flood control district on structuring a development fee to be imposed in conjunction with an assessment district, and on issues arising in connection with formation of a Mello-Roos Community Facilities District.
- The firm has advised local jurisdictions, including the Cities of Sacramento and San Diego, and the County of Sacramento, concerning the various mechanisms available to fund programs such as low income housing, and parks and open space acquisition. The firm also has advised special districts regarding open space and other special use taxes, and the implications of various proposed statewide ballot measures that would affect the taxing powers of municipalities and special districts.

## **Other Areas of Practice**

Other areas in which the firm specializes include:

- Public agency administration with respect to matters such as the Brown Act, Public Records Act, Freedom Of Information Act, and conflict of interest issues
- Historic Preservation
- Energy Matters
- Redevelopment Law
- Indian Law
- Public Trust
- Mobile Home Rent Control
- Preservation of Significant Resources through acquisition, conservation easements and other means
- Real Estate Transactions
- Legislative Drafting and Analysis

Members of the firm provide litigation, counseling and planning services in each of these practice areas.

## **SAMPLING OF PUBLIC ENTITY CLIENTS**

### **CITIES**

- |                     |                 |                 |                  |
|---------------------|-----------------|-----------------|------------------|
| • Benicia           | • Lafayette     | • Patterson     | • San Ramon      |
| • Berkeley          | • Laguna Beach  | • Piedmont      | • Santa Ana      |
| • Carlsbad          | • Livermore     | • Pleasant Hill | • Santa Barbara  |
| • Carmel-By-The-Sea | • Malibu        | • Pleasanton    | • Santa Clara    |
| • Danville          | • Martinez      | • Roseville     | • Santa Rosa     |
| • Eureka            | • Mill Valley   | • Ross          | • Sausalito      |
| • Fairfax           | • Mountain View | • Sacramento    | • South Pasadena |
| • Fullerton         | • Newport Beach | • San           | • Tiburon        |
| • Half Moon Bay     | • Oakland       | • Buenaventura  | • Walnut Creek   |
| • Irvine            | • Orinda        | • San Diego     |                  |
|                     | • Pacifica      | • San Rafael    |                  |

### **SPECIAL DISTRICTS AND GOVERNMENT AGENCIES**

- Alameda County Waste Management Authority
- California Coastal Commission
- California Department of Forestry
- California State Lands Commission
- Central Contra Costa Sanitary District
- Colorado River Indian Tribes
- Del Norte Solid Waste Management Authority
- East Bay Municipal Utility District
- East Bay Regional Park District
- Fairfield-Suisun Sewer Department
- Irish Beach Water District
- Metropolitan Water District of Southern California
- Monterey Bay Unified Air Pollution Control District
- Monterey County LAFCO
- Monterey Peninsula Regional Park District
- Sacramento Area Flood Control Agency
- Sacramento Housing and Redevelopment Agency
- San Francisco Port District
- San Francisco Redevelopment Agency
- South Coast Air Quality Management District
- Tri-City and County Cooperative Planning Group
- University of California

### **COUNTIES**

- Marin
- Napa
- San Bernardino
- Santa Clara
- Santa Barbara
- Santa Cruz
- Sonoma
- Yolo

## **FIRM MEMBERS**

**E. Clement Shute, Jr.**, a Boalt Hall School of Law graduate, was Assistant Attorney General in charge of the Environmental and Consumer Protection Section of the Attorney General's Office before leaving to found Shute, Mihaly & Weinberger. He was a member of the Attorney General's office from 1964 to 1980. Mr. Shute received his undergraduate degree from the University of California at Berkeley, and completed a program in Environmental Policy and Management at Harvard University.

**Marc B. Mihaly** worked in the California Attorney General's Environmental Unit from 1976 to 1980 prior to founding the firm. He also worked in the San Mateo County Legal Aid Society following his graduation from Boalt Hall School of Law. Mr. Mihaly received his undergraduate degree from Harvard College.

**Mark I. Weinberger** was a member of the Attorney General's office from 1975 to 1980, where he was lead attorney for the Environmental Unit in San Diego and also worked in the Sacramento office before leaving to found Shute, Mihaly & Weinberger. He is a graduate of Harvard Law School and received his undergraduate degree from Stanford University.

**Fran M. Layton** joined the firm in 1983 after three years as an attorney at Wald, Harkrader & Ross in Washington, D.C., where she was involved in litigation before federal courts and federal administrative agencies. Ms. Layton holds a law degree from Boalt Hall School of Law and an undergraduate degree from the University of California at Berkeley.

**Rachel B. Hooper** began working with the firm in 1984 after two years as a law clerk for U.S. District Judge Laughlin E. Waters and two years as an attorney at Kinsella, Boesch, Fujikawa & Towle in Los Angeles. Her law degree is from Boalt Hall School of Law and her undergraduate degree is from Yale College.

**Ellen J. Garber**, a graduate of Boalt Hall School of Law, joined the firm in 1987. Before attending law school, she worked for seven years as an urban planner in public and private practice. Ms. Garber received a Bachelor of Urban Planning from the University of Cincinnati.

**Christy H. Taylor** worked as a law clerk and staff attorney for Chief Justice Malcolm Lucas of the California Supreme Court for two years prior to joining the firm in 1990. She is a graduate of Boalt Hall School of Law and Dartmouth College.

**Tamara S. Galanter**, a graduate of Yale Law School, joined the firm in 1989. Prior to law school, she worked as a political organizer and fundraiser for a statewide environmental and consumer advocacy organization. She received her undergraduate degree from the University of California at Berkeley.

**Ellison Folk**, who joined the firm in 1990, received her law degree from Boalt Hall School of Law. She also holds a Masters in City and Regional Planning from the University of California at Berkeley and an undergraduate degree from Princeton University.

**Richard S. Taylor**, who joined the firm in 1991, previously worked as an attorney for Paul, Weiss, Rifkind, Wharton & Garrison in Washington, D.C., where he was involved in environmental compliance and international trade. He holds a law degree from Boalt Hall School of Law and a Masters in Business Administration from the University of California at Berkeley; his undergraduate degree is from the University of California at Davis.

**Elizabeth M. Dodd** graduated from the King Hall School of Law, University of California at Davis. She practiced environmental law with the Sierra Club Legal Defense Fund for three years before joining the firm in 1986. She received her undergraduate degree from Radcliffe College.

**Susannah T. French**, a Boalt Hall School of Law graduate, began working at the firm in 1993. Prior to law school, she worked as a research assistant at the Sierra Club Legal Defense Fund. She received her undergraduate degree from Harvard College.

**William J. White** graduated from New York University Law School and joined the firm as an environmental fellow in 1995. During law school he worked at the Natural Resources Defense Council and Sierra Club Legal Defense Fund, and prior to law school worked at Greenpeace. He received his undergraduate degree from the University of Virginia.

**Susan A. Austin**, a Harvard Law School graduate, clerked for the Honorable William C. Canby, Ninth Circuit Court of Appeals, before joining the firm in 1996 as an environmental fellow. She holds an undergraduate degree from Stanford University.

**Aaron S. Isherwood** joined the firm as an environmental fellow in 1996. He received his law degree from the University of Oregon School of Law and his undergraduate degree from the University of Chicago. Before joining the firm, he clerked for Justice Robert Durham of the Oregon Supreme Court.

**Robert S. Perlmutter**, a Boalt Hall School of Law graduate, joined the firm as an environmental fellow in 1996 after completing a judicial clerkship for the Honorable Thelton E. Henderson, Chief Judge of the U.S. District Court for the Northern District of California. He received his undergraduate degree from Harvard College.

**Laurel L. Impett**, the firm's urban and regional planner, joined the firm in 1989, after working with the EPA for two years as an air quality specialist. She has a Masters in Urban Planning and Architecture and an undergraduate degree from the University of California at Los Angeles, and is a member of the American Institute of Certified Planners.